

What is claimed is:

1. The front substrate of a plasma display panel (PDP) including a colorant-added upper dielectric layer.

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2. The front substrate of claim 1, wherein the colorant controls a light transmittance.

3. The front substrate of claim 2, wherein the colorant is at least one of Nd_2O_3 and cobalt oxide such as CoO , Co_3O_4 and Co_2O_3 .

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4. The front substrate of claim 3, wherein Nd_2O_3 is added in the range of 0~40 wt %, and cobalt oxide is added in the range of 0~10 wt %.

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5. A method for fabricating a front substrate of a plasma display panel (PDP) comprising:

forming a colorant-added upper dielectric layer.

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6. The method of claim 5, wherein the colorant is a material for controlling a light transmittance.

7. The method of claim 6, wherein the colorant is at least one of Nd_2O_3 and cobalt oxide such as CoO , Co_3O_4 and Co_2O_3 .

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8. The method of claim 5, wherein Nd_2O_3 is added in the range of

0~40 wt %, and the cobalt oxide is added in the range of 0~10 wt %.

9. The method of claim 5, wherein the step of forming the upper dielectric layer comprises:

forming glass powder with a colorant added therein at a prescribed rate;

5 forming a dielectric paste by mixing the glass powder, a binder and a solvent;

coating the dielectric paste at the entire surface of the upper glass substrate with a transparent electrode and a bus electrode formed thereon to form a dielectric paste layer; and

10 firing the dielectric paste layer.

10. The method of claim 9, wherein, in the step of forming glass powder, a colorant is mixed in parent glass to fabricate glass, which is then crushed to form glass powder.

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11. The method of claim 10, wherein the parent glass is one of PbO-B₂O₃-SiO₂-Al₂O₃-RO-based glass, P₂O₅-B₂O₃-ZnO-based glass and ZnO-B₂O₃-RO-based glass.

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12. The method of claim 11, wherein the colorant controls a light transmittance.

13. The method of claim 12, wherein the colorant is one of Nd₂O₃ and cobalt oxide including CoO, Co₃O₄ and Co₂O₃.

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14. The method of claim 13, wherein, in the step of forming glass powder, 0~40 wt % of Nd_2O_3 is added to the parent glass or 0~10 wt % of cobalt oxide is added to the parent glass.

5 15. The method of claim 13, wherein, in the step of forming glass powder, both 0~40 wt % of Nd_2O_3 and 0~10 wt % of cobalt oxide are added to the parent glass.

16. The method of claim 14, wherein, in the step of forming the glass
10 powder, 0~40 wt % of Nd_2O_3 is added to $\text{PbO-B}_2\text{O}_3\text{-SiO}_2\text{-Al}_2\text{O}_3\text{-BaO}$ -based glass.

17. The method of claim 14, wherein, in the step of forming the glass powder, 0~10 wt % of cobalt oxide is added to $\text{PbO-B}_2\text{O}_3\text{-SiO}_2\text{-Al}_2\text{O}_3\text{-BaO}$ -based glass.

15 18. The method of claim 14, wherein, in the step of forming the glass powder, both 0~40 wt % of Nd_2O_3 and 0~10 wt % of cobalt oxide are added to $\text{P}_2\text{O}_5\text{-B}_2\text{O}_3\text{-ZnO}$ -based glass.

20 19. The method of claim 14, wherein, in the step of forming glass powder, both 0~40 wt % of Nd_2O_3 and 0~10 wt % of cobalt oxide are added to $\text{ZnO-B}_2\text{O}_3\text{-RO}$ -based glass.

20. The method of claim 10, wherein the fabricated glass is crushed to
25 a particle size of about 1~5 μm .

21. The method of claim 9, wherein the dielectric paste is fired at 550°C~600°C for 10~30 minutes.

5 22. The method of claim 5, wherein the step of forming the upper dielectric layer comprises:

forming glass powder with a colorant added at a prescribed rate;

mixing the glass powder, a binder and a solvent to form a dielectric paste;

10 fabricating the dielectric paste as a green sheet and coating the green sheet entirely on the transparent and bus electrode-formed upper glass substrate to form a green sheet layer; and

firing the green sheet layer.

23. The method of claim 22, wherein, in the step of forming glass
15 powder, a colorant is mixed into parent glass to fabricate glass, which is then crushed to form glass powder.

24. The method of claim 23, wherein the parent glass is one of PbO-
B₂O₃-SiO₂-Al₂O₃-BaO-based glass, P₂O₅-B₂O₃-ZnO-based glass and ZnO-B₂O₃-
20 RO-based glass.

25. The method of claim 24, wherein the colorant controls a light transmittance.

25 26. The method of claim 25, wherein the colorant is at least one of

Nd₂O₃ and cobalt oxide such as CoO, Co₃O₄ and Co₂O₃.

27. The method of claim 26, wherein the step of forming glass powder 0~40 wt % of Nd₂O₃ is added to the parent glass or 0~10 wt % of cobalt oxide such as CoO, Co₃O₄ and Co₂O₃ is added to the parent glass.

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28. The method of claim 26, wherein, in the step of forming glass powder, both 0~40 wt % of Nd₂O₃ and 0~10 wt % of cobalt oxide are added to the parent glass.

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29. The method of claim 27, wherein, in the step of forming the glass powder, 0~40 wt % of Nd₂O₃ is added to PbO-B₂O₃-SiO₂-Al₂O₃-BaO-based glass.

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30. The method of claim 27, wherein, in the step of forming the glass powder, 0~10 wt % of cobalt oxide such as CoO, Co₃O₄ and Co₂O₃ is added to PbO-B₂O₃-SiO₂-Al₂O₃-BaO-based glass.

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31. The method of claim 27, wherein, in the step of forming the glass powder, both 0~40 wt % of Nd₂O₃ and 0~10 wt % of cobalt oxide such as CoO, Co₂O₄ and Co₂O₃ are added to P₂O₅-B₂O₃-ZnO-based glass.

32. The method of claim 27, wherein, in the step of forming glass powder, both 0~40 wt % of Nd₂O₃ and 0~10 wt % of cobalt oxide such as CoO, Co₂O₄ and Co₂O₃ are added to ZnO-B₂O₃-RO-based glass.

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33. The method of claim 23, wherein the fabricated glass is crushed to

a particle size of about 1~5 μm .

34. The method of claim 22, wherein the dielectric paste is fired at 550°C~600°C for 10~30 minutes.